DOCUMENT RESUME

ED 075 410 SP 006 377

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TITLE	Collaboration Between Educational Researchers and School Personnel: Some Reflections and Proposals for Reducing the Research-to-Practice Gap.
INSTITUTION	Stanford Univ., Calif. Stanford Center for Research and Development in Teaching.
SPONS AGENCY	National Inst. of Education (DHEW), Washington, D.C. Task Force on Lab. and Center Transition.
PUB DATE	Feb 73
CONTRACT	OEC-6-10-078
NOTE	46p.; Paper presented at the Annual Meeting of the American Educational Research Association, New Orleans, Louisiana, February 26, 1973
EDRS PRICE	MF-$0.65 HC-$3.29
DESCRIPTORS	*Educational Research; *Educational Researchers; *Research Methodology; *School Personnel; *Teaching Experience

ABSTRACT

This paper explores the potentialities for collaboration between educational researchers and school personnel. A set of principles is offered as a guide for attempts to reduce the research-to-practice gap. The implementation of these principles is discussed within the context of a Teacher Feedback Workshop which was conducted as a development activity of an ongoing research project. Finally, a proposal for the structure and process of a collaboration effort is outlined. A 23-item bibliography and appendixes concerning the Teacher Feedback Workshop are included. (Author)

ED 075410

COLLABORATION BETWEEN EDUCATIONAL RESEARCHERS AND SCHOOL PERSONNEL: Some Reflections and Proposals for Reducing the Research-to-Practice Gap

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The research reported herein was conducted at the Stanford Center for Research and Development in Teaching, which is supported in part as a research and development center by funds from the National Institute of Education, U.S. Department of Health, Education, and Welfare. The opinions expressed in this publication do not necessarily reflect the position, policy, or endorsement of the National Institute of Education. (Contract No. OEC-6-10-078, Component 3C).

SP 006 377

American Educational Research Association Annual Meeting

February 26, 1973

New Orleans, Louisiana

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Educational researchers are encountering teacher and administrator skepticism toward proposed research with increasing frequency. These critics claim that professors of education are too far removed from the realities of the classroom to offer any helpful suggestions to practitioners. In addition, it is said that research tends to state what everyone already knows in a language that no one understands! Researchers counter by deploring teachers' lack of an analytic approach to their work and by pointing out their defensiveness regarding their teaching effectiveness.

Fortunately, the research-to-practice gap is not as wide as I have portrayed it. Within the collective bargaining process, teachers are beginning to demand not only increased salaries, but also a greater voice in changes in educational programs (Rapp, Munson, and Ensign, 1971). Teachers are expressing the idea that they possess an expertise which is valuable in the planning of reform. They also argue that they are responsible for providing learning experiences for students and hence, expect to be involved in the process of linking instructional aims to proposed changes.

Educational researchers are also going through a period of reorientation. Following an era of heavy federal funding for regional laboratories and research and development centers, some researchers are facing the fact that their endeavors have had little impact on the work of teachers in classrooms. The problem is not that the centers and laboratories failed to do significant research, but that the "trickle-down" theory of educational reform

(Bailey, 1971) has flopped.

An alternative research methodology which takes seriously these past and emerging experiences can be formulated. The basic premise of this methodology is that educational research should be conducted jointly by researchers and practitioners to produce findings that are both theoretically and practically relevant.

This paper explores the potentialities for collaboration between educational researchers and school personnel. A set of principles is offered as a guide for attempts to reduce the research-to-practice gap. The implementation of these principles is discussed within the context of a Teacher Feedback Workshop which was conducted as a development activity of an on-going research project. Finally, a proposal for the structure and process of a collaboration effort is outlined.

THREE PRINCIPLES FOR REDUCING THE RESEARCH-TO-PRACTICE GAP

The following principles are offered as a preliminary attempt to specify conditions for reducing the research-to-practice gap.

Principle I: Communication of research results to teachers is a complex process which integrally involves the individual's feelings of competence.

Researchers have not dealt seriously with the complex problems of communication of research results to teachers who are participating in research projects. Findings of educational research - especially those which relate to teaching - have implications for

the individual's self-esteem and behavior change. Hence, it is not merely a dissemination problem.

Sieber's (1972) discussion of the image of the educational practitioner as "the rational man" is especially relevant to Principle I. The practitioner is conceived as a person who bases decisions for change on the best information available concerning alternative courses of action. The focus of change is certain intellective processes. The only obstacle to change is ignorance. Thus, Sieber describes the Rational Man: "He needs only to be informed about the best method for teaching reading to second graders, the best textbooks on American History, the best techniques for improving children's mental health, or the most up-to-date prepackaged course on mathematics, chemistry, or biology. If so informed, he will change his mind about his current practices; he will experience an intellectual awakening (p. 364)."

The typical channel of influence is one-way communication through the printed word, lectures, and films. There are two limitations to this approach. First, teachers typically do not read the research literature. Lazarsfeld and Sieber (1964) found in a national survey of elementary school teachers that only one percent read the Journal of Educational Psychology, the Review of Educational Research, or the NEA-Research Bulletin. None of the publications which the teachers read regularly were listed in America's Educational Press as information sources about

research. Second, teachers do not have the time to sift through the journals, nor have they been trained with sufficient technical competence to evaluate findings and their potential practical applications.

Many findings of research may be packaged, field-tested, and disseminated with accompanying explanatory literature. However, findings which affect individuals' beliefs, esteem, and attachment to practical skills can be difficult to accept. Thus, there is a special need for persons who have the sensitivity and creativity to communicate research findings in ways which will produce positive consequences for teachers and their students. This need has been recognized by the U.S. Office of Education, which has previously relied on print and electronic dissemination channels as a means of educational change. U.S.O.E. is now planning teams of educational "extension agents" who will provide linkages between researchers and practitioners.

Principle II: Direct teacher participation is essential for planning and carrying out changes in their own teaching.

Theory and research from group dynamics provide a rich base for developing strategies for the involvement of teachers in planning their own changes in teaching. Research on participation in decision making indicates that persons are more committed to and more likely to carry out decisions in which they have been involved (Cartwright, 1968, Lewin, 1947).

The rationale for participation in the research endeavor has been described by Mann and Likert (1952). They suggest that personal involvement decreases the barriers to the utilization of the data, while increasing the probability that the results will be understood and emotionally accepted. Involvement also yields motivation to apply the results to the individual's situation.

There is some evidence that teachers tend to accept and to regard as valuable those in-service programs which are planned with their involvement (Childress, 1969). Dutton and Hammond (1966) compared two methods of in-service training for mathematics teachers. The first method (MI) used a college professor of mathematics to give weekly lectures on selected concepts for eight weeks. Teachers were expected to do readings and complete assignments. In an equivalent group of teachers (MII), district staff members, along with teachers, assessed individual weaknesses and designed individualized programs to help each teacher with his specific problems. At the end of eight weeks, teachers in Method II achieved greater gains in teacher attitude toward and knowledge of mathematical concepts than those in Method I. Although there are some minor methodological problems in this study, the findings indicate that in-service training which involves teachers in the assessment of their own needs, and plans for individualized training can have positive consequences for their teaching.

This principle operates most clearly in the concept of the British "teacher center" (Bailey, 1971). These centers are based

on the tenet that fundamental educational reform will come only through those who have the basic educational responsibility - the teachers. Furthermore, teachers will take reform seriously only when they have been responsible for defining their own educational problems and receiving help on their own terms. In England and Wales, there are approximately 500 centers, over half of which are staffed with full-time leaders.

Principle III: Attention to individual differences in research on teaching increases the probability that results will have practical value.

Practitioners have repeatedly pointed to their personal styles of teaching or "bag of tricks" as an explanation for successful classroom teaching (McCauley, 1972; Marram, 1971). Researchers in the organization of teaching have outlined reasons for the great variability among teachers in instructional activities (Bidwell, 1965; Lortie, 1969). There is no standard body of knowledge and skills which is transmitted in teacher training programs. Once teachers enter the classroom, there are limits on collegial interaction. Except for possibly the open-plan school or teaming, teachers rarely observe their peers at work (Meyer, Cohen, et, al., 1972).

However, researchers on teaching have tended to ignore individual variations in teacher behavior. In his review of teacher variability within and between special curriculum programs, Rosenshine (1970) notes that there are few existing studies

dealing with this problem. Furthermore, the generalizability of the results is limited by the small number of teachers involved in the studies and the disparity of the observational systems used.

The line of analysis of individual differences which is suggested by Sidman (1960) has promise for linking research and practical applications. Sidman (1960) postulates that subject variability is derived from differences in the functional relations between a behavior and its controlling conditions for each person. Thus, the shape of a curve based on group data may indicate that a specific behavior increases as some independent variable increases. However, examination of the individual data indicates that each subject reacts maximally at different values of the independent variable. In cases like this, application of group results to individual persons may be erroneous. Furthermore, when we are suggesting changes in individual behavior, group results can be simply misleading.

In communicating with teachers about their <u>own</u> behavior and its effect on students, the individual data analysis suggested by Sidman (1960) has potentially useful consequences. Teachers can use their results as a basis for confronting what they are doing, and how they might plan for changes in their behavior. They can make these decisions on relationships found for their own behavior, not on generalized relationships which may not apply to them.

In summary, three general principles need to be considered in reducing the research-to-practice gap: (1) communication of

research results to teachers is a complex process which integrally involves the individual's feelings of competence. (2) Direct teacher involvement is essential for planning and carrying out changes in their own teaching; (3) Attention to individual differences in research on teaching increases the probability that results will have practical value.

An attempt was made to implement these principles at a workshop for teachers participating in a research project of the Stanford Center for Research and Development in Teaching (SCRDT). Several projects in the Teaching in Low-Income Areas Program of the Stanford Center have begun to develop procedures for communicating research results to school personnel. The procedures which are described in this paper pertain to Project 3C - Student Engagement: Classroom Settings.[1] (See list of footnotes on page 18 of this paper.)

AN ATTEMPT TO REDUCE THE RESEARCH-TO-PRACTICE GAP

Background

The project originated in the concern for student engagement in learning in low-income area schools.[2] From the practical application perspective, student engagement is one of the crucial problems facing teachers. Without students' interest and involvement, learning cannot occur.[3] From the perspective of research on teaching, teacher motivational techniques have not been the focus of much research attention (Maehr and Sjogen, 1971; Rosenshine and Furst, 1971).

We began by examining teacher strategies which are related to high levels of student attention, involvement, or engagement in classroom learning. Twenty-four teachers from nine schools in the Mid-Peninsula and San Jose, California area volunteered to participate in the research during the school year 1971-1972. The teachers and students were observed at five different times during the school year - September, October, November, February, and April-May. When the teachers were recruited for the study, we contracted with them to provide a workshop at the end of the observations which would report findings up to that point.

The Teacher Feedback Workshop

On May 6, 1972, the Teacher Feedback Workshop was conducted at Stanford University. Twenty-one out of the twenty-four sample teachers participated in the day-long workshop. The morning session covered the aims and procedures of the project. Detailed descriptions of the observation instruments were also presented. A report of findings based on analysis of group data was presented to provide a context for understanding the individual data analysis which was given to teachers in the afternoon sessions. The morning discussions centered around issues which would be relevant to teachers regarding their own behavior:

1. How much of the time during classroom observations are students engaged?

   How much of the time during classroom observations are students disengaged?

   Note: In the individual feedback sessions, these questions

become translated: How much of the time during classroom observations are my students engaged? How much of the time are they disengaged in my classroom?

2. What strategies do teachers use?
3. Which strategies are most frequently used?
   Which strategies do teachers use least?
4. How can student engagement and disengagement be related to specific teacher strategies?
5. What is the Engagement Impact Score (EIS)?
6. Which specific teacher strategies appear to have the most impact on student engagement?
7. Which specific teacher strategies appear to have the least impact on student engagement?
8. How important are these group findings for your own teaching behavior?

Results were presented in non-technical language with a heavy reliance on graphics to illustrate specific points. The purpose of this mode of presentation was to facilitate teacher involvement with the information by making them realize that the data dealt with their own teaching situation.

As a result of the morning sessions, all of the teachers reported that they had received an adequate picture of the project and its goals.[4] Some teachers stated that the presentation of group data had provided them with the concepts and information with which to approach feedback about their own behavior.

In the afternoon sessions, all teachers received individualized feedback from trained feedbackers. Procedures had been developed by the project staff to utilize videotapes as a means for discussing individual data analysis based on classroom observations (See Appendix II). The three principles, which were discussed earlier in this paper, were applied to the planning and implementation of the individualized feedback sessions.

First, communication of research results to individual teachers involves the person's feelings of competence and has implications for behavior change. Hence, all feedbackers were dealing with a potentially ego-threatening situation. The videotapes were used to start the teacher to look at her/his behavior. Hence, the first videotape segment was used for "cosmetic effect" in which the teacher viewed her/his teaching without comments on strategies. During this period, feedbackers were instructed to be supportive and reassuring, and to encourage the teacher to express her/his observations of what was going on in the classroom. An attempt was made to create a supportive climate in which the consequences of individual behavior could be discussed.

During the individualized feedback sessions, the discussion centered around the analysis of individual teacher data. Teachers had been asked before coming to the workshop what kinds of information they wanted from the feedback sessions. The teachers' responses formed an additional basis for "individualization" of the feedback. Group analysis was available for purposes of comparison

if the teacher desired however, the focus of inquiry was the individual teacher. Questions covered for group analysis (pages 9-10 of this paper) were applied to individual data: e.g., what strategies do you use most often? What strategies do you use least? Which specific strategies appear to have the most impact on student engagement on students in your class? Which specific strategies have the least impact on student engagement in your class? Individual data analysis was especially relevant in this case, because preliminary examination of individual versus group patterns indicated a wide range of variability in the impact of specific teacher behaviors on student engagement. For this particular project, feedback to teachers based on group results, would have been erroneous and misleading.

Furthermore, the presentation of individual data analysis provided the teacher with an information base about her behavior and its consequences from which to make decisions about change. By use of the videotape, the teacher's strategies which had high and low engagement impact on students were identified. The teacher's attention was drawn to the students' reactions to her own behavior. In the last segment, the teacher, herself, was asked to point out her strategies and note their effects on the students' engagement.

During the individualized feedback sessions, the feedbackers refrained from making any prescriptions regarding changes in teacher behavior. During a preliminary data analysis state in our project prescriptions to teachers would have to be premature. More important,

the goal was to start teachers planning changes in their own behavior, based on a knowledge base derived from observation in their classrooms. Thus, the responsibility for determining the direction of change was placed decisively upon the teacher. The objective impartiality of the feedbacker and of the data presentation helped teachers to approach the findings in a constructive manner. Together with the feedbacker, the teacher explored different interpretations of the data and pieced together a pattern satisfactory to her.

There is some evidence from teachers' responses to a questionnaire that the findings presented at the workshop will have positive consequences for their teaching behavior. Sixteen out of the seventeen teachers who answered the questionnaire reported they had learned something new about their teaching. Twelve of the teachers thought that they should change some of the ways they teach, and sixteen said results and discussions in the workshop could really help teachers change their teaching behavior. Sixteen of the teachers thought that the results will be useful to classroom teachers in general, and all replied that they believed educational research can produce knowledge useful to teachers.

In summary, the Teacher Feedback Workshop was effective in reducing the research-to-practice credibility gap. This evidence gives the principles presented in this paper some validity. Informal teacher response to the workshop supported these conclusions. In their thank-you letters to the staff, teachers pointed to the

"special, individual attention which they received"; "the opportunity to receive feedback" as "a valuable aspect of the study"; to the fact that "you didn't tell us what to do (like everyone else seems to), but gave us some basis for making our own decisions." Finally, one teacher wrote, "I know your project is designed to improve teaching, not just study it, so now I am working to apply what I learned Saturday. I thank you, and my pupils thank you!"

The Teacher Feedback Workshop was a beginning attempt by one project at the SCRDT to reduce the research-to-practice credibility gap. Much of what we have accomplished will be of potential usefulness in development of feedback procedures for other research projects. Some suggestions for improving our relationships with school personnel emerge from our present activities. These will be discussed in the concluding section of this paper.

A PROPOSAL FOR REDUCING THE RESEARCH-TO-PRACTICE GAP IN EDUCATIONAL RESEARCH

The following proposal emerges from my current involvement with research and development work, and from my experiences as a researcher who has worked with school personnel to improve the quality of teaching and learning. The proposals are based on the firm conviction that both the quality of education research and the quality of teaching depend upon a reciprocal and continual process of interaction between researchers and practitioners. School personnel no longer need be passive subjects of research, but can be active participants in understanding and hopefully changing the conditions under which teaching and learning presently occur.

The collaboration process should be structured to take into account two important organizational requirements: (1) The need to institutionalize the process to assure continuity and renewal, (2) Attention to the authority structure of school organizations or specifically the need for administrative sanctions and participation in collaboration. The incorporation of these requirements into the collaborative process recognizes that it is not merely attitudinal resistence to change which is the problem in the utilization of knowledge, organizational constraints also pose significant barriers.

The organizational aspect of the collaborative process is integral to the formalization of relationships between researchers and school personnel. The collaborative process should be organized

to provide for a Research Advisory Council in which joint decision-making and exchange of ideas can occur. Contracts which state mutual responsibilities and obligations between the researchers and school staff can also serve to formalize the collaborative relationship and its reciprocal character.

Participation by the school staff should be included from the onset of the research activities. In this connection, a frequent criticism of research by administrators is "You come to us after you've identified the problem. Next time, let's talk about it before you begin." The Research Advisory Council would be composed of researchers, school personnel from all levels of the teaching and administrative ranks, and community people. Representation from different roles among the school staff recognizes a wholistic approach to educational research - the need to be aware of all possible variables and their interactions as they relate to the specific problem under investigation. The cross-role representation recognizes that all participants possess knowledge which is vital to data analysis and interpretation.

Thus, the council could serve as an area where research problems are identified, alternative research strategies are considered, and the validity of instrumentation and data analysis are questioned.[5] Questions of bias are especially crucial when researchers are working with populations who differ from them in ethnic-cultural backgrounds. Through the process of exchange, bias in instrumentation may be reduced, and important issues which are not recognized by the researchers can be incorporated in the design. Group and shared

decision-making processes are likely to strengthen commitment to the research efforts and to future utilization of the findings.

Finally, engagement in the collaborative process signifies a long-term commitment on the part of researchers to deal with the realities and problems of school systems. In the process, the researcher places himself in a position of vulnerability (Goulet, 1971) with the school personnel. In the process of exchange with school personnel, the researcher opens himself up to the questioning of his theories and assumptions, methodology, and interpretation of problems. This vulnerability is essential for the development of collaboration between educational researchers and school personnel.

These suggestions are offered as general and preliminary statements, for if we take this discussion seriously, patterns of collaboration will emerge once we, as researchers, start to bridge the research-to-practice gap. There is no more specific proposal then "Let us begin."

LIST OF FOOTNOTES

[1]Project 3C was under the direction of Robert D. Hess and Ruby Takanishi-Knowles with the collaboration of research assistants Ann Bouie, Kalei Inn, Anne Morton, and Terry Taylor. Technical support staff included Janet Weston, Administrative Assistant; Secretaries Joan Huff and Jean Ziebron; Observer and Data Processing Team - Marsha Alper, Betty Dietz, Mary Lee Thomson, and Lucy Williams. Susan Hurwitz and Gerry Mercadante assisted during Spring, 1972.

The Project could not have been carried out without the collaboration of all these people, and others not mentioned here.

[2]A description of the first year of this research will be published by the Stanford Center for Research and Development in Teaching - Robert D. Hess and Ruby Takanishi-Knowles. Teacher Strategies and Student Engagement in Low-Income Area Schools. Stanford, California: Research and Development Memorandum No. (in press).

[3]Student engagement is assumed to be highly related to measures of student achievement. Several recent studies using behavior-based measures provide good support for this assumption (Cobb, 1972; Lahderne, 1968; Meyers, et. al., 1968).

[4]Annegret Harnischfeger and Frederick Ross conducted an evaluation of the Teacher Feedback Workshop. Their complete

report is included in Appendix I.

[5]Two books, which discuss action research methodology with teachers, provide case studies of the collaborative process. (Corey, 1953; Schumsky, 1953).

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APPENDIX I·

Report on Teacher Feedback Workshop

REPORT ON WORKSHOP C?

Project 3C: Student Engagement: Classroom Settings
Teaching Students from Low-Income Areas

May 6, 1972

by

Annegret Harnischfeger and Frederick Ross

Stanford University
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I. THE TASK OF THIS REPORT

When the research staff of 3C first contacted the teachers in order to invite them to participate in the project, they emphasized their plan to give "feedback" to the teachers, that is to report the findings to the teachers.

The workshop on May 6, 1972 was set up to report preliminary findings to the teachers who participated in the project. But its function was not only one of dissemination: the staff of 3C was also interested in getting comments on their work which would improve future research.

The authors of this report, who were not directly involved in the 3C Project, were asked to evaluate the workshop. We would like to point out that this report is not an evaluation of the project or the planning of the workshop, but only of the workshop itself and the teacher's participation in the project.

We assume that the reader of this report is familiar with the 3C Project. We, therefore, give no project description.

II. THE RATIONALE FOR THE EVALUATION

One major goal of the 3C Project is to make research relevant to the teacher's daily work. As one consequence, the staff expended much effort at dissemination of information about the project and its results.

The evaluation is mainly concerned with the following questions:

1. Were the preliminary findings presented in a way that was understandable to teachers?

2. Could the findings have consequences in the daily work of the individual teacher?

3. Are the teachers' comments likely to improve future research of the kind presented?

4. Was the working relationship between the staff and the teachers supportive of future field research?

We prepared a questionnaire for the teachers which helped us in answering these questions. Besides this, we talked with many teachers during the workshop and attended all large group meetings. The questionnaire was given to the teachers at the end of the "Feedback" sessions. All teachers still present at this time (17) answered the questionnaire.

III. ATTENDANCE

The workshop was attended by 21 out of a total of 24 teachers who participated in the project. These teachers were located at nine different schools. Two out of the nine principals attended the morning sessions.

IV. ORGANIZATION OF THE WORKSHOP

As can be seen from the schedule (see Appendix A), in the morning sessions the project, its instruments, and its preliminary group findings were presented while in the afternoon sessions individual findings were presented including an analysis of videotaped classroom observation. Group discussions were held in which teachers commented on the project and their individual teaching experiences.

One observation was that the workshop was very well organized. Time and room planning were excellent. This has to be mentioned because individual afternoon sessions which needed many rooms and changes of location really required thorough planning and a feeling of responsibility from all staff members.

V. PRESENTATION OF FINDINGS

During the morning sessions of the workshop the project, its instruments, and its preliminary findings were presented by members of the staff. Special attention was given by the staff to the dissemination function of these sessions.

In our opinion, the presentations were given in a clear nontechnical language. The audience understood the main points and were thus able to comment on the project and its findings in an effective way. Several questions raised and comments given seemed to be relevant for consideration in future research of this kind. A little confusion was caused by the percentage definition of strategies used which the teachers had to estimate during one session. Absolute numbers instead of percentages might have been easier to estimate. The teachers obviously enjoyed their participation in the sessions. The comments we got after the sessions showed their great interest and understanding.

Seven of the 17 teachers who answered the questionnaire[1] pointed out (I.5) that they now understood the goals of the project differently than at the time they decided to participate, although this would not have changed their decision. Three teachers would have liked more detailed information before they decided to participate. Most of the teachers (11) got all information needed to agree to participate. However, most of the teachers were not in favor of a workshop prior to the observations (I.6).

Those who would have liked a workshop pointed out that they would have liked to know more about the specific goals of the observations in order to plan their teaching around them and in order to feel more familiar with the whole situation, especially in the first observation period (II.2).

The need for more information is also expressed in the teacher's preference for a workshop after the first observation period. About half of the teachers felt a need to discuss their experiences with other participating

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[1] The results of the questionnaire are given in Appendix B.

teachers. Many teachers told us during the workshop that they would have preferred a "feedback" session earlier.

All teachers who answered the questionnaire said that they got a rounded picture of the program and its specific goals (III.1). Most of them felt that this information would be of interest to other teachers who have not participated in the project (III.2), although their estimates of other teachers' attendance in the morning sessions had only an average of 30 percent however ranging from "0" to "100" (III.4). This low attendance rate might be the reason that about half of the teachers suggested not to invite other teachers (III.3) to this kind of workshop.

The teachers were somewhat more critical about the presentation of the individual findings in the afternoon. We expected this, because the individual use of strategies and their relation to student's engagement was not always favorable and it is somewhat more difficult to accept unfavorable individual results. Thus, although fourteen out of 17 teachers felt that the materials presented had good examples of their teaching behavior, one teacher felt the material was unrepresentative of her teaching style, one teacher found the material unclear, one too concentrated, and three teachers were claiming incompleteness (IV.3).

The authors did not attend the individual afternoon sessions. The members of the staff who presented the individual findings later reported that the teachers' reactions were very different depending more on the individual personality than on the findings, and that they needed a more in-depth understanding of the characteristics of each teacher before a really effective individual "feedback" session can be run. On the whole, fourteen out of 17 teachers said that most or all of the findings of the project were consistent with their personal knowledge and experiences.

For the future, the staff might consider a workshop for detailed information immediately after the first observation period. The method of informing individually before the observation period seemed to satisfy most of the teachers. The interest for more detailed information which some teachers expressed would have to be considered in the light of equal information for all teachers participating in the project in the future. For the presentation of the individual results even more personalized methods might be developed, in order to avoid dissatisfaction of those teachers whose results are less favorable.

VI. CONSEQUENCES OF FINDINGS FOR THE TEACHERS' DAILY WORK

The results of the questionnaire seem to indicate that the findings presented at the workshop will have definite consequences for most of the teachers participating in the workshop. Sixteen of the 17 said that they had learned something new about their teaching (IV.4). Twelve of the 17 teachers think that they should change some of the ways they teach (IV.5), and sixteen of the 17 teachers felt that results and discussions like those of the workshop could really help teachers change their teaching behaviors (IV.6) but they pointed out that immediate "feedback" after each observation is preferable in order to gain insight into their classroom behaviors when it is still fresh in their memory.

The teachers' comments on the project in general further indicate that they saw the findings as having definite utility for the classroom teacher. Sixteen of the 17 teachers responding thought that the results of the project will be useful to classroom teachers in general (V.2), and all of the teachers indicated they believed educational research can produce knowledge helpful to teachers (V.4).

VII. TEACHERS' COMMENTS ON IMPROVEMENT ON THIS KIND OF RESEARCH IN THE FUTURE

Nearly all of the teachers seemed to have some constructive criticism about aspects of the project, especially in relation to those areas of the project dealing with teacher strategies. About a third of the teachers thought that all strategies chosen are highly important in teaching. Nearly a third was uncertain about this and another third felt that some important strategies are missing (III.5). Among strategies which the teachers considered to be important and which were not included in the project were the following: grouping of students in the classroom, types of reinforcement, interrelations of different strategies, positive and negative aspects (III.6).

The teachers were less critical concerning the students' engagement instrument (III.7). Here we asked for typical ways teachers are aware of students' interest and engagement in the learning task. Most often the teachers answered that they assess students' engagement by the types of questions they raise (III.8).

A special problem in the classroom observation was the videotaped sessions. Disruption in nearly all classes occurred because of the bulkiness and extensiveness of the equipment. If there is no solution to the problem of bulky equipment then, the teacher proposed, a more frequent practice is necessary before the observation would start, in order to observe "usual" classroom behavior.

The members of the staff stated they learned something more about the strategies, especially the necessity to disentangle the positive and negative aspect of strategies. We were told that the staff is looking for a solution to the videotape problem.

VIII. WORKING RELATIONSHIP BETWEEN THE TEACHERS AND THE STAFF

The teachers were asked several questions which helped us to assess their experiences and opinions about the working relationship with the 3C staff. One main indicator that shows the good relationship is the teachers' workshop attendance. Out of the total of twenty-four teachers, who participated in the project, twenty-one teachers and two principals (out of 9) attended the workshop.

Looking back at the period of recruitment of the teachers, from the seventeen teachers who answered the questionnaire, twelve felt invited and five felt urged to participate (I.1). Those teachers who felt urged pointed out that this was not on the part of the research staff, but on the school side. One teacher felt "obligated to return a favor from a fellow teacher" whom she had asked to participate in another program. The positive comments ranged from

why shouldn't I be observed on to being pleased to see profits on both sides and feeling thrilled at the opportunity to participate. No teacher felt pressed to participate.

We asked the teachers to estimate the rate of participation in the project if we had invited all teachers in their schools (I.2). The teachers' estimates ranged from 10 to 100 percent of participation with an average of about 60 percent. This figure does not seem to be too high if we take into account that the teachers got some money for their participation. Surely, the main person for the research staff was ultimately the principal who had to be convinced that the project was of importance to teaching. The participation of some of the teachers was obviously due to some "urging" by the principal. Fourteen of the 17 teachers discussed the question of participation with their principal, seven of these only with him, while two teachers did not look for any advice. None of the teachers who were asked refused to participate in the project.

The question if the teachers would mind observers coming into their classrooms unannounced gave us information on the relationship between the teachers and the observers. Eleven out of 17 teachers would not mind. This is an unexpected high number and indicates very good relationships between the teachers and the observers. This finding was confirmed during the workshop, where we observed a very friendly relationship between teachers and observers. It is interesting that except one all teachers who did mind unannounced observers were feeling urged to participate in the project. The teachers felt free to comment and ask questions. Only the afternoon group sessions seemed to suffer partly from shyness on the side of the teachers. This is probably due to mainly two reasons:

1. Differently from the morning sessions no material was presented. They were pure discussion sessions.

2. The teachers seemed to be reluctant to participate because they perceived the discussion leader to be such an "expert" on the topic under discussion. This was again different from the morning sessions, where except for the introduction all presentations were given by staff members.

For the future the staff might consider to have a non-professor as a group leader. We think that some materials like specific instruments or findings would result in a freer discussion.

At the end of the workshop day very many teachers expressed that the day was unexpectedly interesting and pleasant. Sixteen of the seventeen teachers who were still present indicated their interest to participate in this kind of project in the future.

Appendix A

Stanford University

Stanford Center for Research and Development in Teaching

Project 3C: Student Engagement: Classroom Settings
Teaching Students from Low-Income Areas

FEEDBACK OF RESEARCH FINDINGS

TEACHERS' WORKSHOP*

Saturday, May 6, 1972

Tresidder Memorial Union, Room 274

8:30 - 9:00	Coffee and Doughnuts
9:00 - 9:15	Welcome and General Orientation - Robert D. Hess
9:15 - 9:30	Project Description and Rationale - Ruby Knowles
9:30 - 10:30	Explanation of Observation Instruments used in
	Project Student Instrument - Terry D. Taylor
	Project Teacher Instrument - Anne Morton
10:30 - 10:45	Coffee Break
10:45 - 12:00	Presentation of General Findings Based on all Teachers
	Teacher Strategies Associated with Student Engagement in Classrooms - Mary Lee Thomson
12:00 - 1:45	Lunch Tresidder Memorial Union, Room 275
1:45 - 4:00	Individualized Feedback Sessions**
	Videotape Viewing and Feedback - Cubberley, Stanford School of Education
	Group I - Cubberley Hall, 1:45-2:45 Tresidder Memorial Union, Room 274, 3:00-4:00
	Group II - Tresidder Memorial Union, Room 274, 1:45-2:45 Cubberley Hall, 3:00-4:00
4:00 - 5:00	Social Hour, Tresidder Memorial Union, Small Lounge, Room 232

*The morning session will be videotaped.

**For explanation see page 2.

Explanation of Division of Groups I and II

Teachers will be divided into Group I and Group II for the afternoon session. Group I will receive individual feedback at Cubberley Hall from 1:45 - 2:45 P.M. During this time, Group II will remain at Tresidder to discuss the project with Dr. Hess and other members of the staff and to give feedback to them about the project.

Group II will receive individual feedback from 3:00 - 4:00 P.M. at Cubberley Hall. During this time Group I will return to Tresidder for discussions with Dr. Hess and the staff.

You have been assigned to Group_____.

The staff member who will give you individual feedback is _____.

Stanford Center for Research and Development in Teaching

Project 3C: Student Engagement: Classroom Settings
Teaching Students from Low-Income Areas

Workshop May 6, 1972

Teachers' Experiences with and Opinions on the Project

As we pointed out when the research staff first contacted you, one major goal of this project is to make research relevant to the teacher's daily work.

Today's workshop has four central objectives:

—— We want to report to you the preliminary findings.

—— We would like to know if your experiences with this project will have an impact on your daily work.

—— We would like to know how you evaluate your participation in the project and get comments on its improvement.

—— We would like to have your comments on the working relationship between the staff and you so that we may evaluate our own efforts as well as make future research more useful to teachers.

Please help us by responding to the following questions so that we may improve our work and increase the direct relevance of educational research to the educational process.

I. THE PRE-OBSERVATION PHASE

I.1 What were your feelings when you were asked to participate in the project?

___ I felt pressed to participate

___ I felt urged to participate

___ I felt invited to participate

___ I felt (Please specify):_____

I.2 In your opinion, if every teacher in your school were asked to participate, what percentage of your colleagues would agree?

___ percent

I.3 Before you agreed to participate did you discuss this matter with

yes	no	
___	___	your colleagues
___	___	your principal
___	___	persons in the district administration
___	___	your students
___	___	other (Please specify):_____

_____

I.4 Looking back on the contract you and the research staff agreed upon, do you think it was

yes	no	
___	___	appropriate
___	___	violated
___	___	incomplete
___	___	other (Please specify):_____

_____

I.5 Looking at the project now, did you get enough information about it, before you decided to participate?

___ I would have liked more detailed information, specifically on_____

_____

___ I understand the goals of the project differently now than at the time I decided to participate.

___ I got all information needed to make the decision to participate before I agreed.

I.6 Would you have preferred a workshop for detailed information on the project for all teachers participating in the project before the observation started?

___ no

___ yes

I.7 Did you inform the students' parents before the first observation?

___ no

___ yes

I.7.1 If yes in the previous question (I.7): How did you inform the parents?

___ note to parents

___ asked students to report at home

___ meeting of parents

___ other (Please specify):_____

_____

I.8 How many parents objected to the classroom observation?

_____

II. OBSERVATION PERIODS

II.1 Would you have appreciated a workshop sometime after the first observation round, in order to talk about your experiences and compare them with those of other teachers?

___ no

___ yes

II.2 How did you feel about the first classroom observation?

yes	no	
___	___	I behaved differently than usual in the first session.
___	___	My class behaved differently than usual in the first session.

II.2.1 If yes for the class' behavior:

___	___	My students were less involved in their work than usual.
___	___	My students were more attentive to the lesson than usual.

II.3 In the following observation periods - excluding the videotaped sessions -

yes	no	
___	___	I felt that my teaching behavior was as usual.
___	___	I felt that my class behaved as usual.

II.4 Did you feel disrupted in your teaching by the videotaping?

___ yes, very much

___ yes, a little

___ no

II.4.1 If yes in the previous question (II.4):
Could you point out the main reasons for your teaching being disrupted?

_____

_____

_____

II.5 Did you feel that your students were disrupted by the videotaping?

___ yes, very much

___ yes, a little

___ no

II.6 Do you have proposals for improving the videotape sessions?

_____

_____

_____

II.7 In general, how did your students feel about the observations?

___ On the whole, they did not seem to be affected.

___ They seemed to be very interested in being observed.

___ Their comments indicated that they felt proud of being selected for participation.

II.8 How did your students like the videotaping sessions? (Please, choose one answer.)

___ They did not seem to be affected.

___ They seemed to be very interested in the videotaping.

___ They did not like the videotaped sessions.

II.9 Would you mind observers coming into your classroom unannounced?

___ yes

___ no

III. GENERAL ORIENTATION AND PRESENTATION OF GENERAL FINDINGS IN THE WORKSHOP (Morning Session)

III.1 Did the morning session today provide you with information that gave you a rounded picture of the program and the specific goals of this project?

___ no
___ partly
___ yes

III.1.1 If no or partly in previous question (III.1):
Were the presentations

___ incomplete
___ too technical
___ too concentrated
___ unclear?

III.2 Do you think the information presented in the morning would be of interest to other teachers who have not participated in the project?

___ no
___ probably not
___ I am not certain
___ probably yes
___ definitely yes

III.3 Would you suggest that we invite all teachers from your school for a general presentation of this kind?

___ no
___ yes

III.4 In your opinion, what percentage of your colleagues might have attended the morning session, if we would have invited all teachers of your school?

____ percent

III.5 Do you think that the teachers' strategies chosen for investigation in the project are the most important ones for involving students in classroom learning?

___ I think some important strategies are missing.
___ Many strategies seem to me to be irrelevant.
___ Some strategies seem to be unimportant in teaching.
___ I think that all strategies chosen are highly important in teaching.
___ I am uncertain about this.

III.6 Can you think of important strategies which we have omitted?

1. _____
2. _____
3. _____
_____

III.7 Do you think that the student engagement instrument measures the most important behaviors characteristic of student engagement in a learning task?

___ no
___ probably not
___ I am not certain
___ probably yes
___ definitely yes

III.8 Could you name some typical ways teachers are aware of students' interest and engagement in the learning task?

1. _____
2. _____
3. _____
4. _____

IV. PRESENTATION OF VIDEOTAPED SESSIONS AND INDIVIDUAL FINDINGS IN THE WORKSHOP (Afternoon Session)

IV.1 Did you have a chance to ask all of the questions you wanted?

___ no
___ yes

IV.2 Were the answers to your questions complete enough?

___ no
___ only some
___ yes

IV.3 Was the material presented to you in the individual afternoon session today

yes	no	
___	___	incomplete
___	___	too concentrated
___	___	unclear?
___	___	not representative of your teaching style
___	___	good example(s) of your teaching behavior?

IV.4 Did you learn something new about your own teaching in the afternoon session?

___ no
___ I am not sure about this
___ yes, a little
___ yes, very much

IV.5 As a result of the workshop, do you think that you should change some of the ways in which you teach your classes?

___ no
___ probably not
___ I am uncertain
___ probably yes
___ definitely yes

IV.6 In your opinion, could classroom observation of the kind presented and individual discussions like those in today's afternoon session help teachers change their teaching style?

___ no
___ probably not
___ I am uncertain
___ probably yes
___ definitely yes

V. PROJECT IN GENERAL

V.1 Do you think that more communication among participating teachers would have resulted in more commitment to the project?

___ no
___ probably not
___ I am uncertain
___ probably yes
___ yes, definitely

V.2 Do you think that this project can produce knowledge which will be useful to teachers in the classroom?

___ no
___ probably not
___ I am uncertain
___ probably yes
___ definitely yes

V.3 Are the findings of the project consistent with your personal knowledge and experiences?

___ no

___ some of them

___ most of them

___ yes

___ I am uncertain

V.4 Do you think that educational research can produce knowledge which is useful to teaching and learning in the classroom?

___ no

___ I am uncertain

___ yes

V.5 Would you like to participate further in this kind of project in a more intensive working relationship with the staff in the future?

___ no

___ yes

If yes, please write your name and address on the attached paper. Use separate envelope because of anonymity.

Thank you for your support of our work.

APPENDIX II·

Guidelines for the Utilization of Videotape in Feedback to Teachers

Teacher Feedback Workshop

Guidelines for the Utilization of Videotape in Feedback to Teachers

Ruby Takanishi Knowles
Betty Dietz

Project 3C: Student Engagement: Classroom Settings
Teaching Students from Low-Income Areas

Stanford Center for Research and Development in Teaching
Stanford University
May 1, 1972

Teacher Feedback Workshop

Guidelines for the Utilization of Videotape in Feedback to Teachers

I. Preparation for Providing Videotape Feedback

A. Videotape Segments

1. There will be approximately 13 minutes of teacher videotape segments available for viewing.

a. 3 min. - Cosmetic Effects

b. 5 min. - 1st Videotape Segment

c. 5 min. - 2nd Videotape Segment

Note: The segment for "Cosmetic Effect" will immediately precede the first five-minute tape.

2. Become well acquainted with <u>all</u> of your teacher's videotape segments. Be prepared to identify most of her strategies. Know which strategies are exhibited in the tape segment; know where ones are <u>not</u>, (particularly if they are this teacher's most or least engaging strategies).

B. Check the date (day, time) of the videotape, and subject matter being taught.

C. Become <u>throughly</u> acquainted with available data and analysis for your teacher. Talk to the observers who have seen this teacher in class. They may have some comments which can be helpful in approaching the teacher.

II. The Videotape Feedback Session

A. Short Orientation to Session

1. Inform the teacher what you have planned for the half hour videotape feedback session. Stress that this is an opportunity to look at at her videotape, and that non-videotape-related questions can be discussed afterwards. (If you are in a group which receives individual non-videotape feedback first, this point may not apply.)

2. Tell teacher how the videotape segments were selected (some common problems which were avoided: technical difficulties, teacher not on film, students blocking camera, etc.)

3. Keep your orientation brief.

4. Start viewing the tape as soon as possible.

B. Cosmetic Effect Segment

1. This segment is used for the teacher to acclimate herself to being on videotape.

a. Ask teacher if she's ever been videotaped before. Try to reassure her if needed.

b. Give teacher an opportunity to verbalize her feelings about viewing herself.

c. Don't comment on strategies during this segment unless the teacher asks you to do so, i.e., direct most of your comments toward responding to her comments and feelings. Again, try to re-

assure her if necessary. (e.g., people tend to look fatter on tapes, as well as pale without make-up, etc.)

C. First 5-Minute Segment

1. Briefly refresh teacher on definitions of strategies upon which you have decided to focus. Have her individual profile available for her to see.
   a. Define the strategies which she uses most often.
   b. Define those which are most engaging for her.
   c. Define those which are least engaging for her.
2. Re-start tape and comment on strategies, pointing them out as they're observed.
   a. Point out positive strategies first .
   b. Pinpoint tape segments where there is a mix of negative and positive strategies.
   c. Pick out one strategy that has the highest level of engagement for this teacher. (If needed, stup the tape and show that part again.)
   d. Draw teacher's attention to the <u>reactions</u> of the students around her, especially in response to her behavior.
   e. Be sure to conclude tape segment by pointing out positive strategies for her.
   f. Ask the teacher if she would like to review any part of the segment.

3. Stop tape to discuss what teacher has seen.
   a. Review her strategies and their impact upon the students.
   b. Ask the teacher for any comments or questions.
   c. Request that she try to point out her strategies during next segment of tape.
4. Start tape of second segment.
   a. Have the teacher point out strategies with as little assistance as possible.
   b. Again, have her note reactions of students around her.
   c. Reinforce the teacher (smile, nod, "Yes!") when she identifies the appropriate strategy.
5. Conclude the session - Closure
   a. After the second 5-minute segment, ask the teacher if she would like to re-view any part of the segment.
   b. Give her the opportunity to comment or ask questions.
   c. Conclude or Summarize the session by noting her strategies you both have seen, and their impact on the students.
   d. Inform her that she can come back at a later date to view her tape more intensively

e. If there is time, get her to express her feelings about the videotape feedback session.

f. Be prepared to leave the video room promptly so that the next people can start.

Note: Feedback to Betty and/or Ruby regarding the adequacy of these guidelines will be welcomed.